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SUNNY DAYS ON THE THAMES.

WHEN city folk, weary of heat and dust, are beginning to think of distant flights—to Switzerland and its eternal snows; to the romantic legendary Rhine; perhaps even farther afield, across the great Atlantic to wondrous Niagara; or farther yet, to that new old world on the shores of the Pacific—I too tire of the closeness and turmoil of the town, and turn my steps towards the pleasant country. I am not going very far, scarcely more than a few miles, but I doubt if any of the travellers on their long journeys will see a lovelier spot.

It is late on an afternoon in early June as I drive along the shady green lanes from the quiet country station, and stop before the gate of a dear old red brick house, which I know and love well. The door stands hospitably open, and in the porch I see kind and friendly faces framed in a wealth of glorious roses and many-tinted creepers, which cling lovingly to the time-stained walls. Good old 'Belle' the black retriever comes to meet me, wagging her tail affectionately; and looking up in my face, seems to ask me what I have done with the curly black puppy I ruthlessly stole from her the last time I was here.

How pleasant the sunny garden looks! How sweet the flowers smell! How delightful does everything appear after the bricks and mortar I have left behind me; and yet here are bricks and mortar too, but ah! not town bricks and town mortar. Time touches the old house with tender hands, and mellows it year by year into richer tints.

A queer old house it is, with odd bits added on to it here and there, in defiance of all the laws of architecture, and startling you with unexpected corners and angles; with quaint tall chimneys springing from the moss-grown roof, out of which the smoke curls lazily in blue-gray clouds, and round which twine the Virginia creeper and purple clematis, trying curiously to peep in at the top of them; with ivy-framed windows flashing in the sun, and overhanging eaves, beneath which the sparrows chirp merrily. The rooms are low, but *so* comfortable; whether great Christmas logs crackle on the hearth, throwing sparkles of light here and there, and leaving the distant corners all dim and shadowy; or whether, as now, the windows stand open to the summer air, and the rooms are invaded by the sweet country scents and the perfume of the mignonette borders outside.

But better than all else of beauty here do I love old Father Thames, and I run rapidly through the house on to the lawn on the other side. There the river wanders at the foot of it, lying across the verdant fields like a silver ribbon on green velvet.

'Let us go to our drawing-room,' says one of the girls who has followed me. 'We shall just have time to do that before dinner.' So we jump into the boat and scull into a neighbouring back-water, where we have christened by the name of 'our drawing-room' a little creek which runs into the bank, and is fringed with pollard willows, making a pleasant shade overhead. We chat cosily there for half an hour, the water licking the sides of the boat with a refreshing sound. A dear little brown water-rat comes and sits near us, and looks curiously at us out of his bright eyes; a kingfisher flashes by us like a sapphire; then the midges come and dance gaily round us, singing a song of which the 'refrain' is ever, 'It will be fine to-morrow!'

To-morrow has come, and the midges have foretold aright! The sun pours a brilliant flood of light into my room, calling me to come to the royal feast he has spread for me (poor weary citizen), of flowers and sweet perfumes and soft balmy breezes. I open the window with welcoming hands as he streams in, and stand there a moment listening to the birds chanting their joyous matins, to the rooks clamouring cheerfully in the tall elms, and to the busy sparrows who twitter noisily just above my casement. Roses have climbed the wall, and are peeping in at me, some still shyly folding their petals around them in virgin modesty, others already baring their glowing hearts to the kisses of the amorous air. The beds of scarlet geranium make brilliant spots of flame on the diamond-studded grass; and the river is no longer a silver ribbon, for it has caught

the sun's reflection, and flows like molten gold between the meadows. It is still early when I betake myself with a book to my favourite seat on the lawn. But I cannot read. The great book of Nature lies open before me, and dwarfs all other literature into insignificance.

After breakfast (even on such a morning as this we must breakfast), as is our wont, we load the boat with books, work, sketching materials, and lastly with ourselves. Two of us take the oars, and to their lazy cadence we glide down the sunlit river in the direction of one of our favourite haunts. The boys, as we still call them, stalwart young Britons though they are, have already disappeared with their fishing-tackle in their canoes; but we shall very likely meet by-and-by, as they know all our pet nooks and corners.

We take our way past the green banks, on which the wild-flowers make delicate jewelled mosaics; by tall beds of graceful wandlike reeds, beneath the shadows made by hanging woods bending to kiss their own reflections in the stream, until we come to a cool and shady retreat, hiding itself away modestly from the sun's bold and ardent eyes. Here we fasten the boat to a willow-stump and prepare to spend our morning happily in this sanctuary of Nature's own making. Some of us begin to sketch a gnarled old tree crowned with a diadem of feathery foliage; others take out their work; and one among us lays hands on a book, as an excuse for silent enjoyment.

Though what silence is there here? The merry insects hum and whirl around us, saying: 'Summer has come, summer has come;' the weary winds, faint with their long winter's strife, sigh softly in the tall tree-tops; a moor-hen calls shrilly from her nest among the rushes; a lark pours from the stainless heavens a rain of melody; and the silence overflows with music. The bright motes dance in the still air, trying to get into our shadowy abode.

Sol is in his kindliest humour to-day; not harsh and fierce, as he will be later in the year, smiting with cruel hands the tender flowers, until they droop their sad heads beneath his hot anger; but wooing them with warm and genial smiles from their gentle mother's breast, beneath which they have been sleeping safely through the chill winter. All things beneath his beams rejoice. The river; the fields in their delicate green robes, which, as they grow bolder under his gaze, they will change for sweeping kirtles of ruddy gold; the silver clouds cradled in the sky's fair arms; even the modest river-buds which scarcely lift their shy eyes above the water. Around us float the pure cups of the water-lilies. The banks by which we sit are fringed with pale forget-me-not; and delicate ferns push their tender fronds through their beds of last year's fallen leaves—life springing from death. The pale pink water-grasses rear their heads above the ripples, and the sun stares them out of countenance, until by-and-by they blush a celestial rosy red; kingfishers gleam by, their blue wings flashing streaks of turquoise.

How sharp and clear the shadows lie in the embrace of the soft stream! Which is the real world, I wonder? The one shining so joyously around and beyond us, or that other lying cool and still beneath our keel? How I should like to plunge down and see! But perhaps if I did, the water-pixies might throw their spells around me, and I might never return to the world above, which after all is fair enough for me.

As I make this reflection, we see the bow of a canoe peeping into our watery bower; and I am brought back to earth by hearing a merry young voice inquiring if we have any lunch to spare. So we unpack our baskets, and landing, spread our sweet country fare on the sward—crisp home-made bread, pats of golden butter, fragrant honey, and fresh creamy milk. Then the talk, which has languished before, becomes brisk; and many a gay jest is bandied round the fallen moss-clad tree which forms our rustic table.

'Read us something,' says one of the merry group—'something suited to the scene.' So a book is taken up by willing hands, and a voice we all love reads us fair thoughts which have arisen in poet-minds while gazing on Nature's lovely works. High and noble thoughts they are, and to me they are dear familiar friends; but to-day, my eyes wander to the poetry in God's creations round me, and I whisper to myself:

> Ye are living poems,
> And all the rest are dead.

So the bright afternoon wears away, pleasant talk alternating with snatches of luxurious silence, and the evening draws on apace. The shadows begin to lengthen, and lie like swartly-clad giants along the grass. The birds hush their song, and here and there the curious fishes spring from their cool bed to take a last look at the dying day. Reluctantly we turn our faces homewards.

Right before us the sun is sinking with passionate glowing cheeks into the murky arms of Night. The gates of heaven open to let Phœbus pass through, and from out them streams a sea of wondrous light, in which pearl and opal clouds float in a lake of delicate green and amber. The trees look inky black against the sky's pure spiritual face. An owl hoots mournfully from yonder stately poplar; the silent bat flits by on noiseless wing; here and there a glow-worm is lighting its tiny lamp; and the frogs croak us a cheery 'Good-night!' as our boat glides softly by the rushes. But not yet do we return it. We say: 'We will come out again when the moon is up.'

And so we do. In defiance of any rheumatic or neuralgic future which our elders prophesy for us, evening after evening we come out to watch the fair Night lighting her beacon-fires overhead.

The mist-wreathed elms stand by the water like rows of ghostly sentinel monks with gray cowls drawn over their heads; the willows look like silver trees transplanted from some far Peruvian garden; and the water drops from the wet blades of the oars in little showers of diamond dew. Above our heads the nightingale is pouring his liquid melody over the land. We listen, still and hushed. Surely our hearts grow purified, and the cares and sorrows of the world drop from us unheeded as we listen.

Philomela's song makes the silence round us seem deeper and more calm. The flowers have folded their delicate robes more closely around them, and have lain down to dream beneath the stars; even the river seems asleep, and the dark shadows clasped so tightly to his breast. Slowly the pale moon climbs the purple vault of heaven, casts from her her gauzy veil, and looks down on us with her pure and vestal eyes. The stars

awaken one by one, and come forth to do her homage. The gold-hearted cups of the water-lilies drink long draughts of silver dew. The willows, like Narcissus of old, gaze wistfully at their own fair faces in the stream; and the aspens quiver with eerie thoughts unknown to us. Surely, riding on the moonbeam which rests on yonder ripple, I see a water-pixie; and resting beneath the shadow of the dock-leaves, I spy a wood-elf! But some one speaks, and they are gone. We drift silently homewards; silently, for our enjoyment has become too deep for words. Silently we land, and still silently I seek my chamber, and opening my window, gaze into the moonlit garden beyond.

The flowers have folded their leaves beneath the soft kisses of the night, and lie sleeping placidly in the dim and tender light; the air is laden with their fragrant breath, which is always sweetest when they lie dreaming beneath the summer stars. The flame-coloured geraniums, the white and wand-like lilies, and the many-tinted roses, are all alike, misty and indistinct; and the sinuous and mossy paths, touched here and there by the soft light, lose themselves in darkness beneath the dusky hedges. Beyond them lies my beloved river, on which the starry river-buds float tremulously. The earth is all at rest, and above it the moon hangs like a silver lamp in the star-lit sky; and overhead one nightingale, the last, for the rest have sunk into silence, trills forth his Elysian chant, and mingles with the dreams of the sleeping flowers.

What a fair world! Is it possible that sorrow exists, that these, God's ineffable works, can ever be defaced by sin?

Such are the days and nights I spend when I make holiday in the old house by the river. Alas! that ever the day should dawn when turning my back on its poetry, I return once more to the prose of our work-a-day world.

THE LAST OF THE HADDONS.

CHAPTER XXV.—IN THE LANE.

I HAD had a motive, which I fancied she did not perceive, in asking Lilian to accompany me on my errand to the Home that morning. It was Arthur Trafford's wedding-day. Mrs Tipper and I had done our best to keep the knowledge of it from her until it was over, and flattered ourselves that we had succeeded.

As we drew nearer home the sound of bells ringing merrily in the distance reached my ears; and in the hope of diverting her attention I talked on, apropos of anything or nothing. I fancied she was heeding, until she said gently: 'It is fortunate they have so fine a day, Mary.'

'I suppose it is,' I replied ungraciously. Then I presently added more pleasantly: 'But it is even more fortunate that you can say so.'

'Dear Mary, what did you expect me to say?'

I took the sweet face between my hands, and looked into the clear eyes, which did not flinch under my gaze, as she added in a low voice: 'I am not in love with another woman's husband, Mary.'

No; I came to the happy conclusion that she was not. There was no cause for further anxiety upon that score. Had I only been right in my fancy about Robert Wentworth, how pleasantly might things now have arranged themselves!

Again I felt obliged to postpone telling Lilian about my coming happiness. It had seemed difficult to talk of my engagement the night before, how much more so now—on Arthur Trafford's wedding-day. I must still wait for a more fitting season, I told myself.

Mrs Tipper had done her best to make the little parlour appear as cheerful and home-like as possible; and I saw that she watched Lilian with loving anxiety. She had prepared quite a feast for our favourite meal that day. If hot cakes and everything else the dear little woman could think of in the way of dainties had been remedies for disappointed love, Lilian might have owed her recovery to them, so plentifully were they provided. She had the comfort of seeing her niece partake of the good things with an appetite which quite set her mind at rest.

If it really cost Lilian something so to gratify her aunt, I believe it was very little. She shewed too that her thoughts had not been absent during our morning's work, by joining very earnestly in my narration of what had taken place, and giving a very decided opinion about Mrs Gower. Before we bade each other good-night, Lilian had succeeded in satisfying Mrs Tipper, as she had satisfied me, that she was 'not in love with another woman's husband.'

As days passed on my news remained still untold. Something seemed always to be intervening to cause me to put off the telling it until the morrow. Looking back, I see how very slight were some of the causes which I allowed to prevent me from opening my heart to my companions; although at the time they appeared sufficient.

Meantime we were occupied from morning till night, Lilian and I working together as with one mind. But we presently began to miss our master, as Lilian laughingly termed him, and I grew more than anxious as the days he had accustomed us to expect him passed without our seeing him. Not once had we heard from or seen him since that never-to-be-forgotten night. Did he really blame me? Could he not forgive me? I tormented myself with all sorts of doubts and fears, in my heart of hearts dreading something even worse than his blame or anger. Robert Wentworth was not the man either to judge harshly or to be unforgiving.

It was nearly a fortnight since we had seen him, when one evening Becky mysteriously beckoned me out of the room. Lilian was playing one of our favourite sonatas, and I made my escape unobserved.

'Another letter, Becky?' I asked, putting out my hand for it with a smile.

'No, Miss; it 's a woman this time,' returned Becky. 'She says that she wants to see you alone, and she won't come in. I was to tell you she 's waiting down at the end of the lane, and to be sure to say you are to go by yourself.'

'What kind of woman is she, Becky?' I asked, my thoughts at once reverting to Nancy Dean.

'A more disagreeable one I never see,' very decidedly returned Becky. 'And as to behaviour, she seemed just ready to snap my nose off when I asked what name I should tell you. "No name at all," she said.'

'I will go, Becky.'

'Poor Nancy!' was my mental ejaculation; 'she has got into trouble again. It was perhaps too much to expect her to remain with people who believe her to be so much worse than she really is, just when she needs to be encouraged and strengthened.' I was stepping from the porch, when Becky earnestly pleaded for permission to accompany me.

'Do, please, let me come too, Miss Haddon, dear!' she whispered. 'I could stand a little way off, so as not to hear; and if she touches you'——

'She will not hurt me, Becky. Do not fear it. I know who she is.'

Becky stood aside, silenced if not convinced. I went out into the summer-scented air, and just pausing by the way to gather a rose for Nancy, passed on down the lane.

Not the slightest doubt as to whom I should see for a moment crossed my mind. My surprise was all the greater when I came in sight of a woman standing erect by the stile with her arms folded across her chest; who, a moment's glance told me, was not at all like Nancy—a tall thin woman, dressed in a long old-fashioned cloak, and what used to be termed a coal-scuttle bonnet.

Quite taken by surprise, I paused a moment to reconnoitre before advancing. She turned her face towards me, and although I did not immediately recognise who she was, I knew that I had seen her before.

'Do you wish to speak to me? I am Miss Haddon.'

'Yes; I know you are.'

Then it flashed upon me who she was.

'You are Mr Wentworth's housekeeper?'

'Yes.'

My heart sank with a foreboding of some evil, and for a moment I could not utter a word. Then screwing up my courage, I asked in as matter-of-course a tone as I could assume: 'He is quite well, I hope?'

'Nobody cares whether he's ill or well, I expect.'

'You are very much mistaken!' I replied, in some agitation. 'Every one who knows him would care a great deal! You ought to know that they would.'

I suppose my face and tone satisfied her that I was so far saying what I thought, though she only shifted her ground of offence in consequence.

'If he was ill he wouldn't be wanting people's pity.'

'But I hope—— Is he ill?'

'Why should he be ill?' she rejoined angrily. Then endeavouring to command herself, she went on: 'But I haven't come here to talk about that. Ill or well, he doesn't know I've come here, and would be very angry if he did. You must please to recollect that. I should have been here before, but it took me two days, putting this and that together, to find out where you live. You are living with the ladies at the cottage down there?'

'Yes.'

'Well, that can't be much of a place; but I suppose situations are not so plentiful, and anything is better than'——

'What is it you have come to say to me?' I asked shortly.

'You are very masterful, and know how to get your way when you want it. You two are a match for each other; and I knew you would find that out. I knew no good would come of it when I let you get the better of me that day; and I'd sooner do anything than come to you now. You may be sure of that.'

'I know that for some foolish reason you took a prejudice against me; but being disliked *before* one is known, ought not to distress one, though I should prefer not being disliked.'

'If you're not hurt you needn't complain,' she replied, as though determined not to yield an inch.

'What have you come to say to me?' I repeated. 'I suppose you did not come all this way to remind me that you are prejudiced against me?'

'No.' She looked over the hedge and around in all directions before continuing; then said in a low voice: 'You thought my master's looked but a poor place for a gentleman born to live in, that day. I saw how sharp you was to notice, and how poor and shabby you thought it all was.'

'You are too ready to ascribe thoughts to me,' I replied.

'But you did now; didn't you? You can't say that you didn't think things looked a bit poor?'

'Mr Wentworth can afford to be more careless about appearances than can most people,' I said, not in the least comprehending her drift. 'It was all well enough for a bachelor's home.'

'Ay, well enough for a bachelor's home perhaps; but not for a married couple, eh?'

'Really!'

'Try to keep your temper for another five minutes, if *you* please, Miss. I know there's no love lost between us two; but I've come here because I've got something to say; and proud and masterful as you are, I know you are the sort to be trusted, and I'm going to trust you. I carried Master Robert in my arms when he was a baby, and I know him and love him more than any fine madam ever can. He was left very poor, and he worked very hard, and a better master or kinder gentleman—— But that's not what I've come to say; nobody will ever know his goodness as I do'—jealously. 'He was poor, and I was poor, and I've had some ado to keep things together for him. But about three years ago my brother died, and things changed for me. He was a small farmer down in Gloucestershire, and everybody called him a miser; but it is not for me to complain of his scraping and saving, for he left all he had to me, and a nice little nest-egg it turned out to be. It's been down in my will for Master Robert from the first day I had it; and it has been 'cumulating ever since; not a penny of it have I ever touched. The pleasure has been to think that there it was all ready for him, though I was too proud to see how much he liked working his way up in the world, to tell him about it before he wanted it.'

'I am sincerely glad to know he has so faithful a friend,' I said, holding out my hand to her.

'Wait a bit, Miss; let me say my say. To-morrow morning that money will be made over to Master Robert, and he will be told that he'll never see no more of me if he won't take it; and the

lawyer he says it brings in pretty nigh ninety pounds a year, now!' Pausing a moment to give me time to recover that.

What could I say? Growing hot and confused and pained as her meaning began to dawn upon me, I murmured: 'It is a good sum—and'——

'And that's not all,' she said eagerly. 'You must remember Master Robert is getting on now and being talked about. I've brought this paper down with me that you may see his name in it for yourself;' taking a newspaper from her pocket, hastily unfolding it and pointing out with trembling finger a short but eulogistic notice of a pamphlet by R. Wentworth. 'There's no gainsaying that, you know.' Slipping it into her pocket again, she earnestly went on, laying her hand upon my arm, and seeing only him in her increased anxiety: 'I don't say that prudence isn't a good thing; I'm not for foolish marriages when there's nothing to depend on; but there's the ninety pounds a year, and what he earns, besides a house to live in, and my services for nothing; and master says my bark's worse than my bite; bless you, *his* wife's no call to be afraid of me!'

'Hush, pray hush!' I murmured, seeing all her meaning now. 'Do you think any one who loved Robert Wentworth would care about all that!'

'Then it is that he isn't loved? God help him!' The cold, hard, set look came into her face again—though she would seem cold and hard now to me never again—and she folded her cloak about her.

'Will you tell me how Mr Wentworth is?' I could not help asking.

'Oh, he's well enough; nobody need think he's going to die of a broken heart. And you must please to remember that he knows nothing about my coming here, ma'am. And perhaps it isn't *too* much to ask you not to mention what a foolish old woman has been talking about?'

'I should be as much grieved as you could possibly be for him to know anything about it, Hester,' I replied in all sincerity.

'Then I wish you good-night, Miss.'

'Will not you shake hands with me?'

'I'm never much for shaking hands, Miss, thank you'—stiffly, both hands folded in her cloak.

'Not for your master's sake? Mr Wentworth is my friend, and I think he would be sorry'——

'He can't be sorry about what he doesn't know.'

'Well, you cannot prevent my respecting you, and that I shall do as long as I live.'

She went on down the lane, and I turned away, burying my face in my hands. Could I ever forgive myself!

Something—for a moment I thought it was a falling leaf—lightly touched my arm, and looking round I saw a large bony hand put from behind. I clasped it without a word; without a word it was withdrawn, and I presently found myself alone. I turned and walked slowly and thoughtfully homewards. How completely though unconsciously she had shewn me her motive for seeking an interview with me! She had divined that her master had had a disappointment, and must have drawn the conclusion that he had been refused solely from prudential motives. Consequently she had come for the purpose of giving me a better knowledge of his prospects than he himself could have done, and was ready for his sake to try to overcome her prejudice against me. Nevertheless, my interview with old Hester tended to make me more rather than less anxious respecting her master.

SEA-EGGS.

The visitor to the sea-side must frequently in his rambles along the beach have picked up specimens of the curious animals which are popularly known as 'Sea-eggs' and 'Sea-urchins.' The former name is applied to these creatures when they are found cast upon the shore and present the appearance of rounded or ball-shaped objects, each inclosed within a hard but brittle limy shell. Whilst the term 'urchin' is given to the same objects when they are seen in their more natural and perfect state, and when the outside of the shell literally bristles with spines. The name 'urchin,' in fact originally applied to the hedgehog, has been extended to denominate the sea-eggs, from their presenting the spiny appearance so familiarly seen in the common tenant of our woods and hedgerows. Thus the sea-egg is the sea-urchin with its spines detached and rubbed off by the unkindly force of the waves; and the animal thus popularly designated is the *Echinus* of the zoologist, and belongs to the large class of animals of which the Star-fishes are well-known representatives.

The entire history of the sea-egg is of so curious a nature that the most casual reader may well feel interested in the account of the animal's present and past life; whilst the feeling of mere curiosity to know something of one of the most 'common objects of the shore,' should prompt every sea-side visitor to make the closer acquaintance of the Echinus.

Suppose that we begin our examination by looking at the hard case or 'shell' in which the soft parts of the animal are inclosed. We find on referring to the development of the animal, that this 'shell' actually represents the hardened skin of the animal, and that viewed in this light, it closely corresponds to the shell of the lobster or crab. The shell is flattened at each pole, and we can readily perceive that it is composed of rows of little limy plates, which are disposed in a regular manner from pole to pole, or after the fashion of the meridian lines on a globe. Counting the series of plates, we find the shell to be composed of twenty rows; but we may also perceive a difference between certain of the plates of which the rows are composed. Thus we find two adjoining rows of plates, which are perforated with holes. The next two rows are not so perforated; whilst the third two rows possess holes like the first rows. We may, in fact, proceed round the shell, and come back to the point at which our examination began, with the result of finding that we may group the whole of the twenty rows of plates of this curious limy box into two sets—those with holes and those without; and we may further discover that there are five double rows of perforated plates, and that these alternate with other five double rows which do not possess holes.

Each little plate of the sea-egg's shell may be most accurately described as being hexagonal or six-sided in form; but this shape may be more or less modified in certain regions of the shell.

The five double rows of the shell which are perforated with holes, it may be remarked, are those through the apertures in which the small 'tube-feet' of the animal are protruded. And it may also be noted that in some of the sea-eggs these perforated rows do not extend from pole to pole of the shell, as in the common species, but are limited so as to form a rosette-like figure, on the upper surface or at the upper pole of the shell. This modification is well seen in a group of sea-eggs, not uncommon round our coasts, and which are popularly named 'Heart-urchins' from their peculiar shape.

The outside of the shell presents us with some curious features; the zoologist's study leading him thus to carefully note points which an ordinary observer would hardly deem worthy his attention. When we examine the outer surface of the shell, we find it to be thickly studded over with little rounded knobs or 'tubercles,' which are, if anything, most numerous on those parts or rows of plates which are not perforated. And if we carefully study one of the spines we shall find that it is hollowed out or is concave at its base. Clearly then, the spines are meant to articulate by means of these hollowed or cup-shaped bases with the rounded knobs on the outside of the shell, and in each case a true ball-and-socket joint is thus formed. The spines are thus intended to be moved, and they are not only firmly attached by a ligament or band of fibres to the surfaces of their tubercles, but appear to be moved by special muscles, which form a thin investing layer on the outer surface of the shell. The spines undoubtedly serve as organs of defence, but in some species they are employed as boring-organs to scoop out holes in the sand or shallow beds in rocks, in which their possessors lie snugly ensconced.

The outer surface of the shell also bears certain very peculiar appendages, known as 'Pedicellariæ.' These little organisms also occur on the outer surface of Star-fishes and other members of the sea-egg's class; but regarding their exact nature and functions, zoologists are still in doubt. The form of one of these pedicellarians may be best imagined by figuring to one's self a small or minute stalk attached to the shell, and bearing at its free extremity two or three little jaws, which move actively upon one another, with a quick snapping motion. These little jaws can be seen to seize particles of food, and there is no doubt whatever that they possess a life and vitality independently of the sea-egg or other organism upon which they reside; since their movements are seen to continue after the death of the animal which affords them lodgment. Some naturalists have regarded them as 'peculiarly modified spines;' but the reasons or grounds for this belief are anything but clear, since it is difficult to imagine any reasonable explanation of the means whereby a spine could acquire an active living and independent nature. By good authorities, who have not ventured to theorise so boldly, the pedicellariæ have been regarded as *parasites* of some kind or other; and they may also possibly represent stages in the as yet unknown development of some organisms. Whilst, assuming them to be fully-grown beings, their function, as they exist on the shell of our sea-egg, has been supposed to be that of seizing particles of food, and of removing waste or effete matters.

The internal structure of the sea-egg shews its near relationship with the Star-fishes and Sea-cucumbers. The mouth is the large orifice opening at the lower pole of the shell; so that as our sea-egg crawls slowly and mouth downwards over the bed of the sea, or over the floor of its native pools, it can procure food without any very great trouble as regards its conveyance to the mouth. The internal furnishings of the body include a stomach and complete digestive system, along with a very peculiar set of jaws or teeth, lying just within the mouth, the points or tips of the jaws being usually protruded from the mouth-opening. This arrangement of teeth is named the 'Lantern of Aristotle,' and comprises five conical pieces, so arranged together and so provided with muscles, as to be perfectly adapted for bruising the sea-weeds and other forms of nutriment on which the sea-eggs subsist. Their near neighbours the Star-fishes do not possess any teeth; although curiously enough, the unarmed sea-stars prefer a richer dietary than that which contents their sea-egg neighbours, since they devour large quantities of oysters and other molluscs. Our sea-egg possesses a heart for circulating its blood, in the form of a simple tube; and although no distinct breathing-organs are developed, naturalists believe that the blood may be purified by being circulated through a delicate membrane which is named the 'mesentery,' and which serves to suspend and support the digestive organs to the wall of the shell. The fact that this membrane is richly provided with the delicate vibratile filaments known as 'cilia,' and that it is bathed in the sea-water—necessarily containing oxygen—and which is admitted within the shell, would seem to favour the idea that it constitutes the breathing-organ of these animals.

The sea-egg is not destitute of means for obtaining some degree of knowledge regarding its surroundings; and it obtains its *quantum* of information through the same channel by which man is brought into relation with the world in which he lives—namely the nervous system. The sea-urchin possesses no structure corresponding to a brain—indeed in all animals of its nature, the nervous system exists in a comparatively low and unspecialised condition. We do not find, in other words, that development and concentration of the parts of the nervous system seen in the highest groups of animals, and which enables these latter to form definite ideas regarding their surroundings and respecting the world at large. A cord of nervous matter surrounds the gullet of the sea-egg, and from this central portion five great nerves are given off; one nerve-trunk passing along the inner surface of each of the perforated double rows of plates of the shell, to terminate at the upper pole of the body. The only organs of sense developed in the sea-eggs appear to consist of five little 'eyes' of rudimentary nature, each consisting of a little spot of colouring matter and a lens. These eyes are situated on five special plates of the shell, developed at the upper pole or extremity of that structure. We thus remark that the parts of the nervous system, along with other portions of the sea-egg's structure, are developed in a kind of five-membered symmetry—if we may so express it. And it is a singular fact that not only throughout the sea-egg's class do we find the number five to represent the typical arrangement of parts and organs—as is well exemplified in the

five rays of the common star-fish—but we also discover that this number is one exceedingly common in the symmetry of flowers. This fact apparently struck an old writer—Sir Thomas Browne—as being a curious and noteworthy feature of the Star-fishes and their allies, since we find him inquiring 'Why, among Sea-stars, Nature chiefly delighteth in five points?'—although to this suggestive query, the learned and eccentric author of the *Religio Medici* gives no exact or satisfactory reply.

The movements of our sea-egg are effected by means of an apparatus, which forms one of the most noteworthy parts of its structure. If a star-fish be dropped into a rock-pool, it may be seen to glide slowly but easily over the bottom of the miniature sea in which we have placed it. When we examine the lower surface of this animal's body, we at once perceive the means whereby its movements are performed; for existing in hundreds, in the deep groove which runs along the under surface of each ray, we see the little tube-feet or *ambulacra*, each consisting of a little muscular tube, terminated in a sucker-like tip. By means of an apparatus of essentially similar kind, the sea-egg is enabled to crawl slowly over the floor of the sea. The tube-feet existing to the number of many hundreds in the sea-egg, are protruded, as has already been remarked, through the holes existing in each of the five double rows of perforated plates of the shell. The mechanism of their protrusion depends on the presence of a special system of vessels, known as the 'ambulacral' vessels, which carry water to the little feet, for the purpose of their inflation and distension.

Thus on the upper surface of the shell we find a single large plate perforated with holes like the lid of a pepper-box. This plate opens into a long tube called the 'sand-canal'—a name which is decidedly a misnomer, since the function of the plate resembling the pepper-box lid is to allow water to enter this tube, but at the same time to exclude particles of sand and like matters. The sand-canal terminates in a circular vessel, which, like the nerve-cord, surrounds the gullet; and from this central ring a great vessel, like a main water-pipe, runs up each of the five rows of perforated plates in company with the nerve-cord. At the base of each little tube-foot is a little muscular sac or bag, and into these sacs the water admitted by the sand-canal ultimately passes. When therefore the sea-egg wishes to distend its feet for the purpose of protruding them through the shell-pores, and of thus walking by applying their sucker-like tips to fixed objects, the water in the little sacs is forced into the feet, which are thus distended. Whilst conversely, when the feet are to be withdrawn, the water is forced back, by the contraction of the feet into the sacs, or may be allowed to escape from the perforated tips of the feet, so as to admit of a fresh supply being brought in from the interior.

The development of the sea-egg may be briefly glanced at by way of conclusion, along with a few points in its economic history. The animal, solid as it appears in its adult state, is developed from a small egg, which gives origin to a little body, usually named the 'larva,' but which, from its resemblance in form to a painter's easel, has received the name of *Pluteus*. This little body does not in the least resemble the sea-egg; possesses a mouth and digestive system of its own, and swims freely through the sea. Sooner or later, however, a second body begins to be formed within and at the expense of this Pluteus-larva; whilst as development proceeds and ends, the sea-egg appears as the result of this secondary development, and the now useless remainder of the first-formed being is cast off and simply perishes. Thus the development of the sea-egg is by no means the least curious part of the animal's history, and presents a singular resemblance to the production of the Star-fishes and their neighbours.

The mere mention of the economic or rather gastronomic relations of the sea-eggs may appropriately form a concluding remark to our gossiping remarks concerning these animals. With our British prejudices in favour of eating only what our forefathers were accustomed to consider wholesome, it is not likely that the sea-eggs will appeal with success to be included as culinary dainties. Yet on the continent these animals are much esteemed as articles of dietary and even of luxury. The Corsicans and Algerians eat one species, whilst the Neapolitans relish another kind; and in classic times, when variety rather than quantity or quality was the chief feature of high-class entertainments, the *Echini* were esteemed morsels at the tables of the Greeks and Romans. Here then is an opportunity for another Soyer to tempt the modern cultivated appetite with a new and wholesome dish. Considering that crabs and lobsters are so highly esteemed, the sea-eggs but wait a suitable introduction to become, it may be, the favourite tit-bits of future generations.

A wise philosopher—the great Newton himself—remarked concerning the limitation of our knowledge, that we were but as children, picking up at most a few stray grains of sand on the sea-shore, whilst around us lies the great region of the unknown. Our present study may not inaptly be related to Newton's comparison, since it serves to shew that even the brief and imperfect history of a stray shell picked up on the sea-beach may teem with features so curious and with problems so deep, that the furthest science may be unequal to the explanation of the one or the elucidation of the other. Whilst the subject no less powerfully pleads for the wider extension of the knowledge of this world and its living tenants—knowledge which in every aspect reveals things which are not only wondrously grand, but also 'fair to see.'

THE TWELFTH RIG.

IN SIX CHAPTERS.

CHAPTER V.—THE WORKING OF THE CHARM.

THE theatre was crowded with an assemblage of fashion and beauty, and many were the glances directed towards the boxes, and numerous the comments of those who came to see rather than to hear, on the beauties who shone there like so many stars striving to outsparkle each other.

In one of the side-boxes Eliza was seated with her husband. Passionately fond of music, she seemed to have forgotten her sorrows, till, on turning to Charles to make some observation, she perceived that some young men, acquaintances of his, had entered and were conversing with him. One of them was directing his attention to a

particular box. Following their eyes, she observed a young lady, all in fleecy white and pale blue, with pearls glimmering in her dark hair. A most radiant beauty, her eyes sparkling with extraordinary brilliancy, and seeming to far outshine the lustre of the diamonds that gleamed around; the rich damask of her cheek putting to shame the roses she held in her hand. Several gentlemen stood around her, attentive to every word and look, each striving to win her special regard. She appeared in buoyant spirits, and conversed with great animation, smiling often with singular sweetness. But her smiles, though so bewitching, were distributed carelessly, and she never distinguished any one of those about her above the rest.

Eliza, struck with admiration, gazed at her earnestly. The young lady looked in that direction. Their eyes met. A thrill passed through Eliza's frame. All at once the gay assemblage seemed to vanish from her sight, the lights burned dim and lurid, and the air grew heavy as if with death. The voices of the singers retreated far away. She heard the murmur of mountain rivulets, and the soughing of the wind over a wide space. Before her eyes uprose a lonely field, with the moonbeams shimmering over its dark ridges. She saw herself, and fronting her a shadowy white face and form, like the dim reflection in a stream, of a human figure. Then, mingling with the distant music, the words 'Doomed, doomed!' smote on her ears like a wailing cry of agony, or the scornful laugh of a mocking fiend.

With this scene before her, with these words ringing around her, she sat on, as if in a dream. Had she looked towards her husband, she would have seen a dark cloud on his forehead and a moody look in his eye. Could she have seen into his mind, it would have troubled her more.

'How lovely!' he thought. 'What grace, what ease and animation! And she might have been my wife. What a fool I was! Eliza is pretty enough still, but compared to her'—he turned, that he might make the comparison, but she was unconscious of it. 'Ah! mere country prettiness, which loses half its charm out of its place. Vivacity was her attraction, and that gone, what has she? She looks now as if she did not know what was going on around her. And for her I gave up the beauty that brings all Paris to its feet, lost a handsome fortune, alienated my family, and endangered my prospects from them. Yet that is not the worst. I see now that my marriage with Eliza was a mistake in every way. I was mad to throw away my prospects and happiness thus; to forsake her whom I really loved, and who loved me—then at least. Blind fool that I was!'

There was a stir in that box towards which so many glances were directed. The young lady had risen, and pale as death, leaning heavily on the arm of a middle-aged lady, prepared to leave the theatre. 'She is fainting; the heat is too much for her,' was whispered around. A dozen gentlemen sprang forward to wrap her in her mantle and call her carriage; she thanked them with a faint sweet smile, but uttered no word. When the carriage had driven away and all were out of sight, she cast herself sobbing on her companion's breast, and trembled from head to foot.

'Oh, do not bring me to these scenes any more!' she cried; 'I cannot bear it; indeed I cannot; they are torture to me. I know you meant it kindly, dear friend—thought to rouse and cheer me; but it will not do; I cannot be gay like others while my heart is breaking. Oh, take me far away to some quiet spot, where I may pass the short time that remains to me in peace and seclusion!'

'Darling, we shall leave Paris to-morrow, if you really wish it,' returned the middle-aged lady; and her tone betrayed alarm, as if she feared for the result of so much emotion.

'Eliza!' said Charles, somewhat roughly; 'don't you see all is over and everybody is going away? Are you dreaming?'

She started and looked up with a bewildered air; then she saw how dark his brow was, and the cause puzzled her.

All that night Eliza lay awake tossing feverishly; she made an effort to dispel the thoughts that distracted her and compose herself to sleep; but when she closed her eyes, faces seemed to press close up to hers, familiar faces, that she used to see every day. It was useless to think of sleep, and she lay watching wearily till dawn.

In the morning, Eliza was so feverish and ill that she felt unable to rise. A doctor was sent for. Before he arrived, she had become delirious, and raved pitifully about her old home and her father. Another name too was often on her lips. The doctor, who was an Englishman, as he stood by her bedside, supposed it might be that of her husband. 'Will! Will!' she repeated over and over, sometimes in tender loving accents, then in tones of wild despair. When the physician took her hand she seemed to become conscious of who he was and of her own illness.

'I shall die,' she said in a sad quiet tone. 'I know I shall. There 's no use in your coming to me. You may be the greatest doctor in Europe, but all your skill won't save me. I am doomed, doomed!'

He thought her still raving, in spite of her calm tone; but in reality she was not so now. Her youth and beauty, joined to her piteous look and tones, moved him. Some of her wanderings seemed to shew that she had once been accustomed to a sphere of life far beneath that in which he found her. He thought some sorrow or trouble weighed on her mind, and tried to discover if such were the case. But in answer to his kind questioning she only shook her head or moaned feebly.

On leaving his patient, the doctor sought Crofton. He found him lounging, with a very gloomy brow, over a late breakfast.

'I have seen Mrs Crofton,' he said. 'I do not apprehend any danger at present. It is a touch of fever, which will pass. But I wish to mention that change of air and scene are absolutely necessary for her. I was told by her maid that she has been in the habit of remaining very much within doors of late, and that she has been depressed in spirits.'

'She need not have remained within doors if she did not choose,' returned Charles coldly; 'and if she was depressed, it was totally without cause.'

The other looked at him. It was a strange tone for the husband of one so young and beautiful; and not long wedded, as he had been given to understand.

'Well,' he replied after a pause, 'I recommend that she should be removed to a quiet country

place as soon as possible—to-morrow, if she is able to bear the journey.'

'As you say so, of course it shall be done. My own arrangements do not permit of my leaving Paris at present, but that need make no difference; Mrs Crofton can go accompanied by her maid.'

Again the doctor looked at him, the tone was so indifferent, as if he wished to dispose of the matter at once, and be troubled no more. Merely mentioning the place he thought most suitable for his patient, a quiet little town in the south of France, he bowed coldly, and withdrew.

Charles rose and sauntered to the mantel-piece. 'She acts the fine lady well,' he muttered to himself. 'Ill and out of spirits! *She* has no cause to be so. As much as I lost she has gained. Yet she acts and speaks sometimes as if she had made a sacrifice for me. I could almost fancy that she regrets that clodhopping fellow. It is a pity, after all, she was so ready to jilt him. She can't expect that I will coop myself up in a wretched dreary place. We are not so very devoted now, either of us, that we require no other company than that of the other.'

In the evening Eliza was better; the feverishness had passed, and it was thought she would be able to leave next day; so Charles went to her room to inform her of the doctor's command, and the fact that the journey was to be made without him.

'I have arranged to remain here yet, and can't alter my plans,' he said. 'But my presence could do you no good; and when you are better you can join me; that is, if you wish to do so.'

If she wished to do so! He would not then care if she did not join him! His words and manner implied that she had become a burden to him, which he would willingly cast off, were it possible; since it was not possible, absent himself from her as much as he could. She turned, sighing, away; and Charles left the room without another word, without a kiss.

It had come now that he was actually estranged from her! He could let her go from him alone, ill as she was, and in a foreign land, the land he had brought her to! It was not with any wild passionate pang, such as she would have felt had she loved him, that she thought this; but a dead cold weight pressed on her heart, and a sense of utter desolation came over her.

'Alone, alone!' she murmured. 'Father, lover, friends, home—I abandoned them all, and for what?—for what?'

CHAPTER VI.—THE CHARM DISSOLVED.

Next day Eliza set out, accompanied only by her maid. No one, to see her, would have fancied she was not yet one year a wife.

In the sweet quiet spot to which she went her illness passed away; but she was weaker than before, and her health precarious. Her spirits too sank daily, and the rich glow of her cheek, dimmer during the last few months than it used to be, faded more and more. The sparkling smile of other days, or the discontented pout which had always betrayed any little 'temper,' never dwelt on her lips now. A softened subdued shade settled on her countenance. In her sadness and loneliness, forsaken by him to whom she would still have clung even when love was gone, she turned, in her sorrow, to thoughts which had never occupied her before, to religion, the one source of consolation that remains to the disappointed and unfortunate; fortunate if they can embrace it, and find peace and full satisfaction somewhere at last.

In a peaceful nook, embosomed among a grove of beech-trees, there was a lonely little chapel. Thither Eliza went every evening, and kneeling among the few quiet worshippers, lifted her eyes to the sculptured form above the altar, whose mild angelic face and outstretched arms seemed to speak of pity and sympathy with human woe.

One evening she lingered till dusk began to gather in the quaint old place. It was now again the eve of All-Hallows, and her thoughts reverted to the past and all that had happened during one short year. Looking up at last, she found that the others had gone and she was alone. The pale spectral rays of a rising moon, broken and intercepted by the fluttering trees without, stole in at the windows and crept with a kind of stealthy motion across the floor. The silence was tomb-like. It smote on Eliza's heart. Part of the chapel, where the moonbeams did not pierce, was veiled in gloom, and in the darkness the draperies about the altar seemed to stir and take strange form. Indistinct masses, which looked as if they might at any moment become endowed with animation, filled the corners. Eliza could almost fancy that the dim dead who slept in the vaults beneath were rising round her. She turned to leave the place, and then perceived that she was *not* alone.

A female figure knelt at a little distance, the face buried in the hands. As Eliza moved down the aisle it rose slowly and turned round. With a low shuddering cry she sprang back, and almost sank to the ground. She gasped for breath. She tried to speak, but for some moments in vain. At last, in a loud cry, her voice broke forth: 'In the name of the blessed God and by this holy sign!' (crossing herself rapidly), 'speak! Who and what are you, that twice before have crossed my path? In the lonely field; in the crowded theatre, suddenly changing from an aspect of light and beauty to a ghastly corpse-like image; and now again!'

The figure approached a few steps, the lips moved, but no sound came. Eliza shrank back to the wall, pressing against it as if she would force herself through the stone. A low sigh sounded, a faint tremulous voice spoke: 'Twice before have *you* started up to bewilder and affright me: in the lonely field, when the night-wind was sighing; in the gay assemblage; and here again, the third time. Who and what are *you*, let *me* ask?'

Eliza rose. 'One who is lonely and unhappy,' she answered; 'who, having deserted others, is herself left alone now. If you would know my name, it is Eliza Crofton.'

There was a pause, then in low, awestruck tones, the last word was repeated: 'Crofton! And I am Ellen Courtney.'

'And we meet thus, for the first time knowing each other, though I have often heard your name, and you mine! Did you too, then, go to the Twelfth Rig last Hallow-eve night?'

'Listen, and I will tell you. He did not come home that evening—he, I mean, who is now your husband. There was company at the house, and he was expected. There was dancing and music, but I could not join in it. I stole away to my

own room, and afterwards wandered out into the fields. I had heard of the charm of the Twelfth Rig, but it was not with any settled intention of trying it that I went out. When I got to the field, overcome with sorrow and weariness, for I had walked a long distance, I sank down; and thinking that nothing stirred in that lonely spot but the night-wind, gave loose to the grief and despair that filled my heart. When at last I rose up, I saw a figure wrapped in a cloak standing motionless in the centre of one of the ridges, pale, with wild eyes, and black dishevelled hair. As I gazed, it uttered a dreadful scream, and turning, fled. I had heard stories of the banshee, and I thought this must be it, or some spirit of doom, that had appeared to warn me of my approaching death. I believe I sank down again on the ground. My senses seemed to leave me. I know not what I did, but I heard a voice crying "Doomed, doomed!" and I think it was myself that uttered the words.'

'I heard it,' said Eliza. 'It pursued me as I fled, repeated, I suppose, by the mountain echoes. Ah! how it has haunted me. I tried to crush back the thought; but it was there still, though I wouldn't face it, and I felt in my heart that my days were numbered. Has the clearing up come too late? I have suffered so much, I scarcely feel fit for life now.'

'It comes too late for *me*. Though it was no spirit that stood in the midst of the Twelfth Rig, the charm will work still. I was ill after that night, very ill, else we might have met before you left, and recognised each other. Then came the shock that tore up by the roots the last hopes that lingered in my heart. You know to what I allude. I may speak of it now with calmness, standing as I do on the brink of the grave.—Why do you look so shocked? Have you never heard that Ellen Courtney was dying—dying of a broken heart?'

'No, no! I never heard it, never dreamt of it. O heaven!'—wringing her hands, and raising them above her head, with a despairing gesture—'then I am a murderess! The punishment has descended in full force now. A curse could not but attend my marriage. Did not friends warn me again and again? and yet I persisted—persisted, though faith had to be broken on both sides, a heart cast aside, and trampled on. It was an unholy marriage, and the blessing of heaven could not sanctify it. It was that which made my husband cease to love me, shrivelled up my own heart, and made everything become valueless in my eyes. I was content to suffer myself; it was only reaping what I had sowed. But that *you* should suffer—suffer and die; you, who never injured any one, who must be gentle and good as an angel. But oh!' she pursued, dropping on her knees, and raising her dark eyes pleadingly, as sinner might to saint, 'remove the curse before you die—if heaven so wills—before *I* die, as perhaps I shall, and give me back my husband's love, the only thing that remains to me now.' The last words were uttered in a piteous moan.

'Do not speak so wildly,' entreated Ellen, sitting down on one of the seats, and raising her hand (Eliza marked its transparency) to her damp white forehead. 'You are not so much to blame. Life and happiness could never have been mine, even had you not intervened. If he ceased to love me, as he must have done soon, for he never loved me truly, I could not have borne it. My heart would have broke, and I should have died all the same. You have my forgiveness fully and entirely—and he has too. Do not fret yourself for the lover you forsook. His wound is healed. He has found happiness with one who long loved him in secret. This was the appointed day for his marriage with your cousin, Mary Conlan.'

Eliza started, and the blood rushed to her face. He then had forgotten her; and the thought sent a bitter pang through her heart; yet she thanked heaven that it was so.

'Part of the weight is lifted from my soul,' she said. 'And I have your forgiveness too. Lay your hand on my head, and say again that you forgive me, and breathe a blessing on me.'

The shadowy white hand was raised. It lay like a spotless lily, emblem of heaven's pity and forgiveness, on the dark bowed head.

'I forgive you from my heart. If my earnest wishes can make you happy, be so.—Now I must go.' She rose, but tottered as she attempted to walk.

'You are weak,' exclaimed Eliza. 'Let me go with you.'

'No, no; there is no need. I have not far to go.'

'But still, let me walk with you, and lean on me. I shall think you cannot bear my presence near you, if you refuse.'

'Be it so then.'

They left the chapel together. Not a word was spoken as they walked slowly on till Ellen paused before the gate of a villa.

'Good-bye, Eliza. We shall never meet again on earth. This third meeting, in which each first knows the other, is the last. Even if I lived, we could not be friends, our paths should lie far asunder; though your words, and still more your looks, tell me how it is with you, that we are sisters in disappointment and misfortune. But there'—she lifted her eyes, calm and serene, to the sky, where the moon, now fully risen, gleamed fair and radiant—'there we may meet and be friends for ever. Farewell, Eliza.'

Overcome with emotion, Eliza cast herself, weeping, on the other's breast. For a few moments they mingled their tears together. 'Farewell, Eliza;' 'Farewell, Ellen.' A faint breeze swept through the beechen wood. It came wandering by them, and seemed to murmur in unknown tongue some sentence or benediction over their heads.

There was silence. Eliza felt her companion lean heavily on her. She grew alarmed. At last she said: 'It is not well for you to linger in the night-air. Will you not go into the house now?'

Ellen replied not. Heavier and heavier she leant, with a helpless weight that almost overpowered the other. Eliza raised the drooping head. A white, white face, a dim fast-glazing eye, met her gaze. It was the dead that lay on her bosom.

That night Eliza was very ill, so ill that a telegram was despatched in haste to her husband to come at once, if he wished to see her alive. He arrived next day, but only in time to gaze on a sweet marble face, that changed not even in the presence of the dread remorse that then awoke in his heart, and to clasp in his arms a fair but lifeless child, whose tender eyes had never opened on this world's light—whose only baptism was tears.

A few days after Hallow-eve, Daly received a black-sealed letter. It was that which Eliza had written to him, but never sent.

So they both slept. The remains of Ellen Courtney were conveyed to her own land; and on a dark November morning, when all nature seemed in mourning for the young and beautiful that had passed with the summer flowers, she was laid with her kindred, amidst streaming eyes and voices that blessed her name—

Poor victim of love and changeless faith.

But Eliza lay in a foreign soil, where the myrtle waved above her head, instead of her own mountain-ash—an exile even in death, from friends and home.

LIFE IN ST KILDA.

CONCLUDING PAPER.

On the 16th August I ascended the hill called Connaghar, where all the men had gone to catch and the women to carry home fulmars, leaving the village deserted. The weather was very warm, and although I carried my coat over my arm, I was fain to stop on my way up and cool myself in the light sea-breeze. About half-way up I saw my old friend Tormad, with his ruddy face and large white beard, seated on the edge of the cliff, with his attention fixed on the rope he held in his hands. 'Who is below?' I asked as I sat down beside him. 'Neil,' he answered. 'Is he far down?' 'Far—far,' he replied. Neil's voice could be heard calling from the abyss. In a little a crash sounds from below. Tormad looks anxious, and with craning head listens with deep attention; whilst two girls who had joined us, step with their bare feet to the very verge of the precipice and peer below. One of them, who has a light graceful figure, looks very picturesque as she stands poised on that stupendous cliff. She has a Turkey-red handkerchief on her head, and wears a coarse blue gown of a quaint shape, girdled at the waist, and only reaching to her knees. Her limbs are muscular and browned with the sun. She is engaged to Neil, and naturally feels anxious on his account. A shower of large stones had fallen, any one of which would have knocked his brains out had it chanced to hit; but fortunately a projecting crag above his head saves him. Tormad shifts his position to where he thinks the rock is less frangible. I leave him, and climb to where the cliffs form a lofty head or promontory which commands a view of the face of Connaghar. This hill rises one thousand two hundred and twenty feet above the sea, and is a precipice almost to the summit. The bottom of this tremendous cliff had been cleared of fulmars the previous day by men who had ascended from boats. Now the work had to be done from above.

It is a dreadful trade. A sound like the crack of a musket is occasionally heard, and one sees a huge stone bound and rattle with great leaps into the sea below. Parties of two or three men, laden with birds on their shoulders, are seen climbing by steep and perilous paths to the summit. From the spot where I lie basking in the sun, a path leads downwards to a steep grassy *brae* bounded by a cliff. This is considered a safe road for women, and a number of them go by it to where the men can bring them fulmars. Some of the girls can carry about two hundred pounds' weight, and seem rather proud of their strength; but as they toil up the dangerous path to where I recline, I hear them breathing heavily and in apparent distress; but in a few minutes they are all right again.

In the intervals of work a number of them sit around me and offer me a share of their oat-cakes and cheese, and hand me the little tub covered with raw sheepskin in which they carry milk: 'Drink, drink! you have taken none!' A number of the men also come up the path with coils of ropes and bundles of inflated gannets' craws on their backs. They are all barefooted and stripped to their underclothing. A pile of fulmars has been collected beside us, and the men whilst they rest economise time by extracting the oil. The receptacle for holding the oil is the stomach of a solan-goose, which is held open by one man, while another takes a fulmar, and squeezing the body, forces the oil in a stream from its gaping bill. When the fulmars and oil are carried home they are equally divided. The birds are plucked, and the feathers are sold to the factor for six shillings a St Kilda stone of twenty-four pounds. The flesh is pickled and used as food in winter and spring. The oil is sold to the factor for one shilling a St Kilda pint, which is equal to about five English pints. Over nine hundred St Kilda pints were exported in 1875. I ought to mention that it is the young fulmars that are caught in autumn. No art is required to capture them, as they are unable to fly; but they offer all the resistance in their power by spitting their oil in the faces of the men. The oil has a disagreeable odour. The old fulmars are caught in summer when hatching; a noose tied to the end of a rod being slipped over their heads. About the end of August all the fulmars leave St Kilda and take the young to sea for their education. They are absent for about two months and a half, and return lean and worthless.

On the 1st of September I began to be slightly alarmed that I might be detained on the island until the succeeding summer. No vessel had called since my arrival on the 21st of June. My stock of provisions had become exhausted, and I had to give up tea and coffee, and subsequently bread. The people began to pluck up their little crops, neither sickle nor scythe being used. The oatmeal supplied by the factor being done, the islanders had to depend on the grain grown on the island. The oats are thrashed with a flail; are scorched in a pot or in a straw basket containing hot stones, previous to being ground. The grain is then ground with hand-mills by the women, who work like furies.

On the 7th the new boat went to Stack Lee for *gougan* or young solan-geese, and returned in the evening with a few—about forty to each man. As at the Bass and other fowling stations, so also here are the gougan killed by blows on the head with a stick. The flesh of the gougan is wild and fishy in flavour; but when baked is an article of food. Every morning when I went

up the village the usual salutation included expressions of fear that no ship would arrive. But my anxiety about the arrival of a ship was naturally less than theirs, for they were burning to receive further intelligence about the boat that was supposed to have been lost fourteen years ago. 'Is my poor wife alive? Is my mother, my brother, my son, my father, living or dead? Was my husband saved in some mysterious way, like Donald MacKinnon? Is he married again? Are all the women black in Africa?' Such were the agitating questions that passed through the minds of the people, and often found expression. Every time I went up the hill with my glass I would be questioned by some one on my return whether any vessel was visible, and my answer that there was not, was shouted from one end of the village to the other. The poor people were straitened for oatmeal, which was anxiously expected from the factor.

On the 5th of October in the evening, whilst I was sitting alone in a cloud of peat-smoke, gazing at nothing by the dull light of an iron lamp, my door was suddenly thrown open, and a woman in a state of alarm bawled out that there were strangers in the glen. I suggested that they were probably shipwrecked sailors, whom it would not be right to leave in the glen all night, cold, hungry, and without shelter. This seemed to move the women; and it was arranged that five men armed with staves should go to the top of the hill that separates the village from the glen and shout. In an hour or two the five men returned wet to the skin, and reported that, although they had whistled and shouted loudly, they had got no reply, and that they were sure there must be a mistake. But the woman still insisted that there were strangers in the glen. Next day a steamer was seen bearing away from the island, and it was no doubt her fog-whistle which had created the alarm.

In October, when the nights were getting long, spinning-wheels began to be busy in every house, making the thread which the men afterwards wove into cloth; and I spent the evening in one or other of the cottages, chatting with the people, and endeavouring to improve my Gaelic, and penetrate into their unsophisticated minds. I tried to tell them stories—such as *Blue Beard*—in which they seemed to feel a deep interest; the women sometimes improving my grammar, and helping me out of any difficulty. They would also tell me *sgeulachdan* or tales.

On the 21st October and for many days afterwards all the inhabitants went down the cliffs to pluck grass for their cattle. I saw the women lying on the narrow sloping ledges on the face of the rocks. A false step, and they would have fallen into the sea, hundreds of feet below, or been mangled on the projecting crags. About this time I gave up all hope of getting off the island until the following summer. My oatmeal was done, and after that I was obliged to depend on the people for a share of theirs. But I never wanted, although I put myself on short allowance.

On the 7th November a meeting was held in the church to return thanks for the harvest. A sudden change occurred in the weather: the sky became charged with thick vapour, and there was a heavy fall of hail accompanied by thunder and lightning. On the 8th December I went to the top of the hills, and notwithstanding my light diet, felt remarkably well; but slipping when twenty yards from home, I sprained my ankle, and lay for some time in torture. I crawled into the house, and after a time succeeded in cooking my dinner. I slept none; and next day my room was filled with sympathising male friends and ministering angels. Some brought me presents of potatoes and salt mutton, turf and fulmar-oil. On the 10th I held a levee, the whole people coming to see me between fore and afternoon services. The men about this time began to weave the thread which the women had spun. Both sexes worked from dawn of day until an hour or two after midnight. Their industry astonished me. I soon began to limp about in the evening; and when the nights were dark I got a live peat stuck on the end of a stick, to let me see the road home. At this time I made a miniature ship and put a letter in the hold, in the hope that she might reach the mainland. I was anxious that my friends should know that I was alive. Shortly afterwards I made a lantern out of a piece of copper that had come off a ship's bottom. A large limpet-shell filled with fulmar-oil served for a lamp inside. This lantern, a clumsy affair, was more admired than my sketches. On the 12th of January, which is New-year's-day in St Kilda, service was held in the church; and to celebrate the occasion, the minister preached a sermon.

On the 17th the most remarkable event occurred that had happened in St Kilda for many years. The people had just gone to church when, happening to look out at my door, I was startled to observe a boat in the bay. I had been nearly seven months on the island, and had never seen any ship or strange boat near it all that time. Robinson Crusoe scarcely felt more surprised when he saw the foot-print on the sand, than I did on beholding this apparition. I ran to the shore, where there was a heavy sea rolling, and shouted to the people in the boat; but my voice was drowned by the roar of the waves. A woman who had followed me gave notice to the congregation, and all poured out of the church. The St Kildans ran round the rocks to a spot where there seemed to be less surf, and waved on the boat to follow. I went with the others. When we arrived at the place indicated, the islanders threw ropes from the low cliffs to the men in the boat; but the latter declined to be drawn up, the captain bawling 'Mooch better dere,' pointing to the shore before the village, and putting about the boat. All ran back; but before we got to the shore the strange boat had run through the surf. Instantly all the men in her leaped into the sea and swam to the land, where they were grasped by the St Kildans. In a few minutes their boat was knocked to pieces on the rocks.

The strangers were invited into the minister's house and dry clothes given them. They proved to be the captain and eight of the crew of the Austrian ship *Peti Dabrovacki*, eight hundred and eighty tons, which had left Glasgow for New York five days before. The vessel had encountered bad weather; her ballast had shifted, and she lay on her beam-ends about eight miles west of St Kilda. Seven men had remained in her, and no doubt perished. The ship was not to be seen next day. When the survivors had got their clothes

shifted, they were distributed amongst the sixteen families that compose the community, the minister keeping the captain, and every two families taking charge of one man, and providing him with a bed and board and clean clothes. I myself saw one man (Tormad Gillies) take a new jacket out of the box in which it had been carefully packed, and give it to the mate to wear during his stay, the young man having no coat but an oilskin. The oatmeal being done, the islanders took the grain they had kept for seed and ground it to feed the shipwrecked men. The hospitable conduct of the St Kildans was all the more commendable when one considers that their guests were all foreigners. But long before the five weeks had elapsed during which the Austrians lived on the island, they had by their good behaviour removed the prejudice that had prevailed against them at first. They were polite and obliging to the women, and went from house to house to assist in grinding the grain.

On the 28th January 1877 the wind blew violently from the north-west with heavy showers of sleet. It was the worst day I had seen in St Kilda. The huge waves came rolling into the bay against the wind, which caught them as they fell on the shore and carried them off in spin-drift. Yet many of the women went to church barefoot.

On the 29th the captain and sailors called on me and felt interested in seeing a canoe I had hewn out of a log. They helped me to rig her and to put the ballast right; but we had to wait until the wind was favourable. We put two bottles in her hold containing letters, which we hoped would find their way to the mainland and be posted.

This canoe carried a small sail, and was despatched on the 5th of February, the wind being in the north-west, and continuing so for some days. I thought she would reach Uist; but the Gulf Stream was stronger than I calculated on, and she went to Poolewe in Ross-shire, where she was found lying on a sandbank on the 27th by a Mr John Mackenzie, who posted the letters. Five days previous to the date when we launched the canoe, we sent off a life-buoy belonging to the lost ship. I suggested that a bottle containing a letter should be lashed to it and a small sail put up. This was done; but no one had much hope that this circular vessel would be of service. She was sent off on the 30th January, and strange to relate, drifted to Birsay in Orkney, and was forwarded to Lloyd's agent in Stromness on the 8th February, having performed the passage in nine days. During my residence in St Kilda, several canes that the Gulf Stream had brought from some tropical clime were picked up by the men. One was hollow and several inches in diameter. The St Kildans split these canes and make them into reeds for their looms.

On 17th February the Austrian skipper offered ten pounds for a passage to Harris in the new boat, for himself and men. The St Kildans accepted the offer, and arranged to send seven of their own men to bring her back. They would not allow the Austrians to go alone, being afraid that they (the St Kildans) might be left without a boat, and have no means of getting seed-corn and provisions. They drew lots who were to go, and it was stipulated that I was to be one of them. All was settled except the weather. We were waiting for a promising day, when, on the 22d, about seven in the morning, as I was lying in bed and thinking of getting up to make my breakfast, I was startled by hearing the sound of a steam-whistle. I lay back again muttering: 'It was the wind;' when hark! the whistle is repeated. I leaped up, ran to the door, and saw, sure enough, a steamer in the bay! Huddling on my clothes, I rushed barefoot up the village, rattling at every door, and shouting 'Steamer—strangers!' In a few minutes all the people were astir and hurrying to the shore. I had just time to throw the articles that lay handy into my trunk and to get on board the steamer's boat, which I saw belonged to Her Majesty. Then I discovered that I had left my purse and other property in the house; but the surf was too great to allow me to land again. I got on board the steamer, which I found to be the *Jackal*. 'How did you know we were here?' I inquired of one of the officers who stood on the quarter-deck. 'From the letter you wrote and put into the bottle lashed to the life-buoy.' I ran to the side of the ship muttering to myself: 'There is a Providence that shapes our ends, rough-hew them as we will;' and bawled to the St Kildans in the boat alongside: 'It was the life-buoy brought this steamer here, you incredulous people;' for they had smiled, although good-humouredly, at my efforts to send a letter home. A small supply of biscuits and oatmeal was given to them; and waving an adieu to my good St Kildan friends, we were speedily receding from the island.

I found all the officers extremely friendly and agreeable, and here beg to return my hearty thanks. I was made to feel quite at home. The shipwrecked captain and I were accommodated in the cabin. The Austrian sailors were well taken care of forward, and seemed particularly delighted at again having as much tobacco as they could use. We had been all smoking dried moss.

The wind had risen and the sea become rough; and if the *Jackal* had been half an hour later, she would have been obliged to return with her errand unexecuted; for it would have been impossible for a boat to approach the shore. We reached Harris the same evening, and anchored in the Sound all night. But as this part of the journey has appeared in the newspapers, I need not repeat it. Suffice it that I arrived barefoot and penniless, but in good health and spirits, in Greenock on the 26th. Here my narrative ends.

[Many of the facts related in the foregoing narrative were published in various newspapers in the early part of the present year, and led to considerable discussion. Stormy seasons, as we have seen, may set in, and communication with the proprietor or his factor be rendered impossible; the most anxious efforts to transmit provisions may be rendered abortive, and famine, if not actual starvation, be the result. Various hints for the melioration of the poor St Kildans have been thrown out, amongst others that those isolated beings should quit the island for good, and seek a new home in the more civilised Hebrides or elsewhere. One thing is sufficiently obvious, if the people are to remain on the island, they should be taught to speak and write English. Their adherence to Gaelic condemns them to innumerable privations, above all it excludes them from communication with the outer world, on whose sympathy they are forced to rely. Half a century ago, Dr John Macculloch lamented this exclusive use

of Gaelic; and we echo all he said on the subject. We have no objection to Gaelic being made a philological study, but its continuance as a spoken language is in all respects to be regretted.—ED.]

THE MONTH:

SCIENCE AND ARTS.

THE 'season' is at its busiest: crowds of sight-seers are looking at the pictures in the Royal Academy, the Grosvenor Gallery, and in other resorts, and painting and sculpture are everywhere talked about; while fine art rejoices in its annual holiday, and 'art sales' (which are too often artful) draw throngs of competing buyers. The debates in parliament on reform of our universities have revived the education question; and sanguine talkers who believe that education can do everything, have had to be reminded once more that endowments however ample cannot create genius; that our greatest achievements in science, art, or literature have been wrought by unendowed men, and that nature will not produce a larger proportion of highest quality brain even though schools be multiplied. Meanwhile the experiment for the promotion of scientific research initiated by government has advanced a stage, and the investigators recommended by the Council of the Royal Society have received grants of money from the Paymaster-general to enable them to carry on their work. As this experiment is to be continued for five years, we may reasonably expect that it will assist in resolving the endowment question.

The cost of the expeditions sent out by this country in 1875 to observe the transit of Venus has been ascertained: it is forty thousand pounds; the estimate was twenty thousand pounds. As will be remembered, other nations engaged in the work as well as ourselves; and we have it on the authority of the Astronomer-royal that the total expenditure 'may amount to two hundred thousand pounds.' This is a large sum to pay for the endeavour to solve the problem of the earth's distance from the sun; but the problem is one of essential importance in astronomical science, and there is reason to hope that when all the computations are completed the true answer will appear. Remembering as we do the eclipse expeditions assisted by the Treasury and the Admiralty, and the expensive and abortive Arctic expedition, we agree with the learned functionary above referred to that 'the government has been very liberal.'

By a method known to astronomers, observations of the planet Mars can be made available for determining our distance from the sun. Sir George Airy speaks of this method as 'the best of all;' and as Mars is this year in the most favourable position for these special observations, a private expedition is to be sent to St Helena or to Ascension to make them. The expense will be about five hundred pounds; and this is to be provided by gifts from scientific men, and by a contribution from the Royal Astronomical Society.

The formation of meteorites is a question which has long been discussed by mineralogists and physicists. Professor Tschermak, after much study, has come to the conclusion that the active agent in the process is volcanic. He points out that the meteorites which fall to the earth are angular in form, that they have no concentric structure even in their interior, that their external crust is not an original characteristic, and that they are evidently fragmentary. Examination of the crust has shewn that during the later stages of flight, disruption of the meteorite itself sometimes takes place; and it is a fact worth record, that guided by the appearance of the crust and peculiarity of shape, Professor Maskelyne once succeeded in reconstructing a meteorite from fragments which had fallen miles apart.

From much evidence of this character Professor Tschermak has been confirmed in his views. He argues that 'the finding of hydrogen in meteoric iron is a proof that permanent gases and perhaps vapours, which are the great agents in transmitting volcanic energy, have played some part in the formation of meteorites; and although it may ever be impossible to obtain direct evidence of the volcanic activity which is supposed to have hurled these mysterious masses of stone and metal into space, yet such evidence as the violent gaseous upheavals on the solar surface; the action of our terrestrial volcanoes; and the stupendous eruptive phenomena of which the lunar craters tell the history, lend powerful support to any theory which assumes that meteorites owe their formation to volcanic agency.'

Professor Boyd Dawkins in giving an account to the Manchester Geological Society of his visit to the crater of Vesuvius said: 'A coating of yellow sulphur about three inches thick covered the lip, and beneath this the loose gray ashes gave out aqueous vapour at every pore, which deposited on them in some places white powdery sulphate of lime, in others common salt, sal ammoniac, green chloride of copper, and specular iron ore, which looked like little pieces of shattered mirrors scattered through their substance. It was obvious that here we had a striking proof of the mode in which water, in passing through heated rock, can carry minerals in solution and ultimately deposit them. In these deposits we could easily recognise the mode in which the various metals were brought up from deep down in the earth's crust, and deposited in holes and crannies in the rocks which are accessible to man as mineral veins.' In this description we seem to have an approach towards an answer to the oft-repeated question—Where do metals come from?

Further particulars, which will be regarded as surprising, have been published concerning the Pennsylvania oil-wells. The Delameter well, sixteen hundred feet deep, sends forth gas at such a vehement pressure that a plummet-line weighing sixteen hundred pounds can be pulled out of the bore-hole by hand. The ascending speed of the gas is seventeen hundred feet per second; the quantity amounts to one million cubic feet per hour, or more than fourteen hundred tons a day; and the heating power is twenty-five per cent. greater than that of good bituminous coal. After this explanation it is easy to understand

that the well, situated in a valley surrounded by mountains, furnishes heat and light to the whole neighbourhood. From one of its pipes, three inches in diameter, a flame rushes, 'the noise of which shakes the hills, and is heard at a distance of fifteen miles. For a distance of fifty feet around the earth is burnt; but farther off, the vegetation is tropical, and enjoys a perpetual summer.'

It is known to chemists that turpentine when oxidised in a current of air in presence of water, yields peroxide of hydrogen, camphoric acid, acetic acid, camphor, and certain other less defined substances. The progress of the oxidation is an interesting study, and the solution produced is found to have great power as an antiseptic and disinfectant. White of egg, milk, and beer treated therewith are kept fresh for some time. 'From a series of experiments undertaken with the view of ascertaining to which constituents of the solution the antiseptic and disinfecting property is to be ascribed, the power was found to be distributed between the peroxide of hydrogen and camphoric acid; but the former of these is able to evolve large quantities of oxygen, which in this state is nascent, and of a powerful oxidising nature.'

A curious case of glass-making is published in the Proceedings of the Newcastle-on-Tyne Chemical Society. A large mass of esparto grass was burnt by accident. Lumps which might be called grass clinkers were found among the ashes; and these on being properly treated in a kiln produced glass which is described as 'a very good sample of bottle-glass.' From this it is easy to understand that in past ages some great bonfire of vegetable matter may have led to the discovery of glass. Farmers who are unfortunate enough to have their stack-yards burned, might possibly find straw clinkers among the débris. This would be worth noting, for silica enters largely into the composition of all grasses and cereals.

In South Russia, Hungary, parts of Italy, in Egypt, India, and other parts of the world where no coal is to be had, different kinds of vegetable refuse are used as fuel for steam-engines. In a paper read at a meeting of the Institution of Civil Engineers a table is given of the heating value of the refuse as compared with coal. It has been found in Russia that a little more than four acres can be cultivated with the waste straw of one acre, which when compared with the results of steam-plough trials at Wolverhampton shews that one pound of coal is eqnivalent to four and one-sixth pounds of straw. An engine to burn vegetable waste requires a greater heating surface than an ordinary engine; and those of the most improved construction are self-feeding. In Egypt the stalks of the cotton-plant and megass, or waste sugar-cane, are the principal fuel; and the equivalent quantity of these to one pound of coal is less than of straw. But there are engines in England which burn vegetable waste; and the author of the paper above mentioned is of opinion that 'as the demand for mechanical appliances increases, so will the difficulties increase of obtaining the best qualities of fuel for steam-boilers in rural districts.' And he suggests that the only method of rendering the use of steam-power universal, particularly for agriculture, would be to construct the boiler of the engine so as to utilise the local supplies of combustible material of every kind.'

Among scientific novelties worthy of notice are the Harmonograph, an instrument constructed by Messrs Tisley and Spiller. It combines a series of pendulums, susceptible of motion in every direction, one of which carrying a pen, traces curves of remarkable forms on a sheet of paper. Some of these curves represent waves of sound as given off by a musical instrument, and certain waves of light. Thus the invisible is, so to speak, made visible, with manifest advantage to natural philosophy.—Next, the Otheoscope, a modification of the radiometer designed by Mr Crookes. In this little instrument the vanes do not rotate, but are fixed near a horizontal disc free to move. The influence acting on the vanes is thrown from them upon the disc, and the disc spins round with great rapidity. The useful applications of this novelty have yet to be discovered.—And Mr N. J. Holmes has invented a flaring projectile or shell which when fired from a ship at sea falls into the water at a distance of two miles if required; floats for an hour, and throws out a powerful light, which in dark nights would be useful in detecting the position and watching the movements of a hostile fleet.

The Registrar-general pursuing the even tenor of his way amid the world's excitements, has just published his Report on the public health of 1876. He tells us that the area of London (taking the registration division) is one hundred and twenty-two square miles, with fifteen hundred miles of streets, about two thousand miles of sewers, and 417,767 inhabited houses. The population numbered nearly three millions and a half; but taking in the outlying districts, 'greater London' as the Registrar calls it, contains 4,286,607 inhabitants, among whom the births were 153,192, and the deaths 91,171. Some of these inhabitants live in the Plumstead Marshes, eleven feet below, while the dwellers at Hampstead are 429 feet above high-water mark. These differences of level imply different conditions of health; but the death-rate was not more than 21·3 per thousand; which contrasts favourably with the death-rate in other towns and cities within the kingdom and in other parts of the world.

Economy is an important element in the maintenance of health, and Dr Farr points out what looks like a waste of resources. He says: 'The capital engaged in the gas and water companies of London is L.22,492,157, which realised in the year ending April 1876, a profit of not less than L.1,676,542, or seven and a half per cent. all round. Now, if this amount of capital were required to construct all the works necessary to supply London with the best gas and pure soft water at high-pressure, it could probably be raised at four, or certainly three and a half per cent. less than is now paid in dividends. If the capital were raised at four per cent. L.776,856 would be set free; out of which, after the companies were adequately compensated, there would be a large revenue for education and many municipal purposes.' The facts set forth in this paragraph should be taken into serious consideration by all concerned.

A paper on the Climate of Scarborough in the *Quarterly Journal* of the Meteorological Society is worth attention, as it sets forth the atmospheric movements to which that fashionable watering-place owes the amenity of its summer climate. The highest summer temperature, we are informed, is seventy degrees; and the temperature of the sea

is commonly five degrees below the temperature of the air. 'Another noticeable fact is, that in hot weather, with a tolerably clear sky and a temperature between eight and nine A.M. of about sixty degrees, rising to a maximum during the day of nearly seventy, the wind, which in the morning is blowing from south-west or west-south-west, generally backs to the south-south-east by the middle of the day, bringing in a cool refreshing breeze from the sea. This backward movement of the wind is easily accounted for, when it is remembered that with such a high temperature and an almost cloudless sky, the ground becomes much heated, causing the lower stratum of warm and rarefied air to ascend, while the cooler and heavier air is then drawn in from the sea to supply its place;' and the moisture in this sea-breeze by tempering the sunshine renders outdoor life the more agreeable.

As Fiji is now one of our colonial possessions, enterprising emigrants will perhaps resort thither. They may find information concerning the productions and weather of the group of islands in a paper by Mr R. L. Holmes, published in the last number of the *Quarterly Journal* of the Meteorological Society. The first quarter of the year comprehends the 'hurricane months;' from January 1 to March 28, 1875, ninety inches of rain fell; an inch a day. The driest month is July; the south-east trade-winds are then strong; so strong indeed as to blow away the cotton, which then 'breaks out with a rush,' unless it be quickly gathered. The climate generally is described as healthy; fevers, liver-complaints, and cholera, diseases almost always fatal in a tropical country, being almost unknown. But a painful disease of the eyes is common; and small wounds, even mosquito bites, have a tendency to become serious sores, very difficult to heal. The natives are a decidedly healthy race, notwithstanding that they prefer to build their villages on swampy ground. That no harmful consequences ensue may be due to the position of the islands in the region of the trade-winds, whereby breezes always prevail. Emigrants from Europe soon lose much of their fresh ruddy appearance, their blood gets thin, and they probably lose in weight; but if they will abstain from indulgence in ardent spirits they may become acclimatised with but little risk of health.

SICILIAN BRIGANDAGE.

A WRITER on this subject in the *Edinburgh Review* for April more than confirms all that we stated on Italian Brigandage in an article last January. We have in particular from this writer a clear account of that system of organised iniquity known as the *Mafia*, with its kindred associations the *Camorras*. The Mafia, in fact, has an endless ramification of spontaneous and illegal societies, and it comes pretty much to this, that society in Sicily, high and low, official and non-official, is one great confederacy to rob and murder at will, and otherwise defy or circumvent the law in any way that seems best. The curious thing is how any show of orderly civilised usages can be maintained. Externally, in Palermo and other places, there is an aspect of peacefulness and honesty; but beneath the surface nearly all proceedings are regulated by force and deceit. The very attempt to seek protection from the law brings down vengeance so remorseless that well-disposed persons are fain to be silent under extortion. There are three hundred and sixty communes in Sicily, and every one of them, says this writer, 'has its own Mafia, of which the character varies according to local tendencies and interests. In one place its energies are devoted to the conduct of the elections and the manipulations of the ballot-box; in another, to directing, by means of a *Camorra*, the sale of church and crown lands; in a third, to the apportionment of contracts for public works. . . . By a singular anomaly, the middle class—that very class of which the absence is deplored in the rest of Sicily as the absence of an element of order—forms in Palermo the chief strength of the Mafia. Its proverbial virtues of prudence, industry, and foresight are here exercised in the calling of crime. The so-called *Capi*-mafia are men of substance and education. To them is due the consummate ability with which the affairs of their association are managed—the unity of direction, precision of purpose, and fatality of stroke. They determine with unerring tact all the nice points of their profession; in what cases life may be taken, and in what others the end in view can be attained by mere destruction of property; when an important capture is to be effected; when a threatening letter sent, or a shot of persuasion fired; when it is advisable to suspend operations, and when to inspire terror by increased ferocity. By them, relations are maintained with government offices in Rome, whose intrigues are generally successful in obtaining the dismissal or removal of obnoxious officials; so that complicity with crime is an almost necessary condition of permanence in any responsible position.'

For this state of affairs, which violates all our conceptions of a civilised community, the reviewer offers no practical scheme for redress. Reform, in the ordinary acceptation of the word, seems impracticable. Society is leagued to maintain a universal terrorism. Judges, magistrates, police-officers are incorporated in the gang of evil-doers. The military sent to preserve order are inefficient. Whether from fear or favour, brigandage is triumphant. Evidently the Italian government is powerless to cure the disorderly condition of Sicily. The very members of the government labour under suspicion of complicity. More probably, they are afraid to give offence by acting with persistent vigour. Constitutionalism carried to excess in a region wholly unprepared for it, even in a moderate degree, might be described as the bane of the country. It is in vain to appoint new native magistrates and new police, for all are bad together. The feeble military force sent to support the law is out-manœuvred or laughed at. Without denying that things may mend in the course of ages, we should say, that what Italy wants is a Cromwell with his Ironsides to stamp out by military execution the ingrained villainy which now afflicts one of the finest and most productive islands in the world. As there is, however, no chance of a soldier of the Cromwell type casting up, Sicily, we presume, must continue to be a disgrace to Italy and as great a scandal to Europe as Turkey. W. C.

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